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LISTING OF CLAIMS

1. (canceled)

2. (currently amended) The method according to <u>claim 5</u> ~~claim 1~~, wherein said identified packet processing unit of said more than one packet processing unit (PPU 11 to PPU M) derives from said piece of information associated to each data packet additional information about a desired packet treatment and alterations to be applied to the data packet (112), said requesting from said determined packet processing unit (PPU 11 to PPU M) includes a request for an identification of what desired treatment and what alterations are to be applied to the data packet (112), and said method further comprises a step of applying said desired treatment and said alterations to the data packet (112).

3. (currently amended) The method according to claim <u>5</u> ~~1 or 2~~, wherein said piece of information includes a destination address associated to each data packet (112).

4. (canceled)

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5. (currently amended) ~~The method according to claim 4,~~ A method for processing data packets (112) in a router (110) having a plurality of input ports (114), a plurality of output ports (114) and more than one packet processing unit (PPU 11 to PPU M) for deriving from a piece of information associated to each data packet (112) one of said plurality of output ports (114) to forward said data packet (112) to, said method comprising the steps:

determining one packet processing unit (PPU 11 to PPU M) of said more than one packet processing unit (PPU 11 to PPU M) in response to an appearance of a data packet (112) at one of said input ports (114), wherein said determining one packet processing unit is based on a split of an identifier vector space formed by the complete range of identifier vectors consisting of a set of fields included in the said data packets (112);

requesting from said determined packet processing unit (PPU 11 to PPU M) an identification of a respective output port (114) derived from a piece of packet information indicating where to forward said data packet (112) to; and

forwarding said data packet (112) to said identified output port (114),

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wherein the split of the identifier vector space is

determined by assigning to each packet processing unit (PPU

11 to PPU M) a numerical quantity resulting of a

pseudorandom function (rand) of an identifier indicating

said particular packet processing unit (PPU 11 to PPU M) and

a piece of information (identifier vector) associated to the

data packet (112) to be processed and selecting said packet

processing unit (PPU 11 to PPU M) having the highest

numerical quantity assigned.

6. (currently amended) The method according to <u>claim 5</u> ~~one~~

~~of the preceding claims~~, wherein determining one packet

processing unit (PPU 11 to PPU M) is additionally based on

information about the workload of every single packet

processing unit (PPU 11 to PPU M), whereby said information

about the workload is periodically provided to be utilized

for determining one packet processing unit (PPU 11 to PPU

M).

7. (currently amended) The method according to <u>claim 5</u> ~~one~~

~~of the preceding claims~~, wherein the packet processing units

(PPU 11 to PPU M) exploit the knowledge of the method of

determining the particular packet processing unit (PPU 11 to

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PPU M) for processing the data packet in order to
advantageously adjust their packet processing methods to
take advantage of the said knowledge.

8. (canceled)

9. (currently amended) The system according to claim 12
claim 8, whereby said identified packet processing unit of
said more than one packet processing unit (PPU 11 to PPU M)
derive derives from said piece of information associated to
each data packet additional information about a desired
packet treatment and alterations to be applied to the data
packet (112), said means for requesting from said determined
packet processing unit (PPU 11 to PPU M) are thus prepared
to request an identification of what desired treatment and
what alterations are to be applied to the data packet (112),
and said system further comprises means for applying said
desired treatment and said alterations to the data packet
(112).

10. (currently amended) The system according to claim 12
8 or 9, wherein the piece of information includes the
destination address associated to each data packet (112).

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11. (currently amended) The system according to <u>claim 12</u> ~~one of the claims 8 to 10~~, whereby said system (LC 1 to LC N) is situated at an input port (114).

12. (currently amended) <u>A system (LC 1 to LC N) for processing data packets (112) in a router (110) having a plurality of input ports (114), a plurality of output ports (114) and more than one packet processing unit (PPU 11 to PPU M) for deriving from a piece of information associated to each data packet (112) one of said plurality of output ports (114) to forward said data packet (112) to, said system comprising:</u>

<u>means for determining one packet processing unit (PPU 11 to PPU M) of said more than one packet processing unit</u> ~~units~~ <u>(PPU 11 to PPU M) in response to an appearance of a data packet (112) at one of said input ports, means for requesting from said determined packet processing unit (PPU 11 to PPU M) an identification of a respective output port (114) derived from a piece of information indicating where to forward said data packet (112) to; and</u>

<u>means for forwarding said data packet (112) to said identified output port (114),</u> ~~The system according to one~~

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~~of the claims 8 to 11,~~ whereby said system (LC 1 to LC N)

determines one packet processing unit of said more than one

packet processing unit (PPU 11 to PPU M) based on a split of

an identifier vector space formed by the complete range of

identifier vectors consisting of a set of fields included in

the said data packets, wherein the split of the identifier

vector space is determined by assigning to each packet

processing unit (PPU 11 to PPU M) a numerical quantity

resulting of a pseudorandom function (rand) of an identifier

indicating said particular packet processing unit (PPU 11 to

PPU M) and a piece of information (identifier vector)

associated to the data packet (112) to be processed and

selecting said packet processing unit (PPU 11 to PPU M)

having the highest numerical quantity assigned.

13. (currently amended) A router (110) having a plurality of

input ports (114), a plurality of output ports (114) and

more than one packet processing unit (PPU 11 to PPU M) for

deriving from a piece of information associated to each data

packet (112) one of said plurality of output ports (114) to

forward said data packet (112) to, characterized by a system

(LC 1 to LC N) for processing data packets (112) according

to ~~one of the claims 8 to~~ claim 12.

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14. (currently amended) A computer program product stored on a computer usable medium, comprising computer readable program means for causing a computer to perform a method according to <u>claim 5</u> ~~anyone of the preceding claims 1 to 7~~.

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